## Abstract

## CYCLE SYNCHRONIZATION BETWEEN INTERCONNECTED SUB-NETWORKS

A method to perform a cycle synchronization between several interconnected sub-networks, comprises the steps that a reference node connected to one of the sub-networks transmits a respective cycle time information to cycle masters of all other sub-networks at recurring time instants, and the cycle masters of all other sub-networks adjust their cycle time accordingly. Therefore, a cycle synchronizator comprises a clock offset estimation means (1) to determine a timing error of an own cycle timer (3), and a cycle adjustment loop (2) receiving the timing error determined by said clock offset estimation means (1) to adjust the own cycle timer (3) to reduce its timing error.

(Fig. 3)